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10/542,280	04/10/2006	Ian Orde Michael Jacobs	186813/US (461124-101)	3462
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EXAMINER				
ARYAN-NEJAD, ROSHANAK				
ART UNIT		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/542,280

**Applicant(s)**

JACOBS, IAN ORDE MICHAEL

**Examiner**

ROSHANAK ARYAN-NEJAD

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 1-12, 25 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 5/1/06, 8/23/06 & 10/2/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**  
***Election/Restrictions***

1. Applicant's election without traverse of Group II, claims 13-24 in the reply filed on 1/22/09 is acknowledged.
2. Upon reconsideration of the claims, the previous requirement for restriction has been withdrawn. Claims 1-26 are examined.

***Claim Rejections - 35 USC § 112***

Claims 4 and 5 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131

USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, Claim 4 recites the broad recitation greater than 30 degrees C, and most preferably greater than 35 degrees C at the end of the claim, and the claim also recites greater than 18 degrees C at the beginning of the claim which is the narrower statement of the range/limitation.

In the present instance, Claim 5 recites the broad recitation greater than 30 degrees C, and most preferably greater than 35 degrees C at the end of the claim, and the claim also recites greater than 22 degrees C at the beginning of the claim which is the narrower statement of the range/limitation.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 13, 14, 16 -18, 20, 23,24, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by International Application WO 98/46409.

Regarding Claims 13 and 14, the reference teaches an injection moulding process for injection moulding articles having thin sections such as thin walled containers. (Page 1, Lines 1-5) It also teaches injection moulding flexible thin-walled articles by selection of polymers. (Page 3, Lines 19-20) It further teaches melting a polymer blend wherein

said polymer blend comprises at least one polymer and at least one compatible agent. (Page 6, Lines 1-2) It also teaches that compatible agents polypropylene polymers possessing a very wide range of MFIs 200+ will produce blends suitable for use in the process. (Page 15, Lines 24-30) This also means that the MFI is greater than 100.

Regarding Claim 16, WO 98/46409 teaches that metallocene branched copolymers are preferred. (Page 7, Lines 1-2)

Regarding Claim 17, WO 98/46409 teaches using ethylene/propylene copolymers. (Page 8, Line 11)

Regarding Claim 18, WO 98/46409 teaches a polymer blend made from 60% Exact 4038 and 40% Montell 6100 P. (Example 1, Page 33) It should be noted that percent is described as weight percent in the reference. (Page 17, Line 18) The reference also teaches that many of the polymer blends form a co-continuous structure. (Page 21, Line 28) These satisfy the limitations of this claim.

Regarding Claim 20, WO 98/46409 teaches that using polypropylene polymers possessing a very wide range of MFIs (1-200+) will produce blends suitable for use in the process. (Page 15, Lines 24-30) This meets the limitation of this claim for MFI of greater than 100.

Regarding Claims 23 and 26, the examiner recognizes that all of the claimed effects

and physical properties are not positively stated by the reference. Note however that the reference teaches all of the claimed ingredients, process steps, and process conditions, and thus, the claimed effects and physical properties would inherently be achieved by carrying out the disclosed process. If it is applicant's position that this would not be the case: (1) evidence would need to be presented to support applicant's position, and (2) it would be the examiner's position that the application contains inadequate disclosure in that there is no teaching as to how to obtain the claimed properties and effects by carrying out only the claimed steps.

Regarding Claim 24, WO 98/46409 teaches that the plastomers preferred for use in the process are comparable to VLDPE which are also copolymers of ethylene. It further describes that a VLDPE compared to a plastomer of similar density has a higher level of crystallinity. (Page 8, Line 23-Page 9, Line 1) The reference further teaches that a wide variety of polymers possessing a very wide range of crystallinities will be used in the process. (Page 15, Lines 28-30) Therefore, the reference teaches that one polymer has a higher crystallinity than one compatible polymer. This meets the limitations of this claim.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-12 are rejected under U.S.C. (103) as being unpatentable over international application WO 98/46409 as applied above for Claim 13 and further in view of Walsh (US 6248279).

Reference WO 98/46409 has been discussed above.

Regarding Claim 1, WO 98/46409 does not teach the annealing step of the instant Claim. Walsh teaches annealing the plastic material. (Abstract)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to use the annealing step of Walsh (US 6248279) during the process of WO 98/46409. The rationale to do so would have been the motivation provided by the teaching of Walsh that to do so would relieve any undesired stress or tension within the plastic member. (Column 3, Lines 1-5)

Regarding Claims 2 and 3, Walsh teaches that the thermoplastic material is used in the first fill. The second fill joins or bonds with the first fill and encases the article. It further

teaches that the article can be annealed to a temperature that is sufficient to anneal the article. (Column 2, Lines 50-67), Column 3, Lines 1-5)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to use the annealing step of Walsh (US 6248279) during the process of WO 98/46409. The rationale to do so would have been the motivation provided by the teaching of Walsh that to do so would relieve any undesired stress or tension within the article. (Column 3, Lines 1-5)

Regarding Claim 4, Walsh teaches that the annealing temperature can be raised to 280 degrees F (i.e., 137.7 degrees C) (Column 6, Lines 24-25)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to adjust the temperature during the annealing step of Walsh (US 6248279) during the process of WO 98/46409. The rationale to do so would have been the motivation provided by the teaching of Walsh that to do so would relieve any undesired stress or tension within the article. (Column 3, Lines 1-5)

Regarding Claim 5, Walsh teaches that the annealing temperature can be raised to 280 degrees F (i.e., 137.7 degrees C) (Column 6, Lines 24-25) It also teaches that the particular temperature and time duration of the heat annealing is a function of the material used for the article. (Column 6, Lines 18-21)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to adjust the temperature as taught by Walsh (US 6248279) during



the storage process of WO 98/46409. The rationale to do so would have been the motivation provided by the teaching of Walsh that to do so would relieve any undesired stress or tension within the article. (Column 6, Lines 28-30)

Regarding Claim 6, Walsh teaches the encapsulated member can be annealed.  
(Column 2, Line 67)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to annealing the required portion as taught by Walsh (US 6248279) during the process of WO 98/46409. The rationale to do so would have been the motivation provided by the teaching of Walsh that to do so would relieve any undesired stress or tension within the article. (Column 3, Lines 1-5)

Regarding Claim 7, WO 98/46409 teaches that the strips are bent back upon themselves and stapled (i.e., crimped) from the bend. (Column 3, Line 30)

Regarding Claim 8, WO 98/46409 teaches melting a polymer blend wherein said polymer blend comprises at least one polymer and at least one compatible agent.  
(Page 6, Lines 1-2)

Regarding Claim 9, WO 98/46409 teaches using polypropylenes. (Column 6, Line 26)

Regarding Claims 10 and 12, WO 98/46409 teaches melting a polymer blend wherein said polymer blend comprises at least one polymer and at least one compatible agent.

(Page 6, Lines 1-2) It also teaches that compatible agents polypropylene polymers will produce blends suitable for use in the process. (Page 15, Lines 24-30)

Regarding Claim 11, WO 98/46409 teaches compatible agents polypropylene polymers possessing a very wide range of MFIs 200+ will produce blends suitable for use in the process. (Page 15, Lines 24-30) This also means that the MFI is greater than 100. (Page 15, Lines 24-30)

Claim 15 is rejected under U.S.C. (103) as being unpatentable over international application WO 98/46409 as applied above for Claim 13.

Regarding Claim 15, WO 98/46409 shows that it is known to carry out the process of claims 13 and 14, as noted above, including a MFI greater than 200 (Page 15, Line 29). The examiner notes that WO 98/46409's teaching of a MFI greater than 200 includes MFI values in a range with a low endpoint of 201 with an unlimited upper range. This range overlaps the claimed range of 301 and an unlimited upper range. According to MPEP 2144.05 (I), in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a prima facie case of obviousness exists. Therefore, it would have been obvious to choose a polymer with a MFI of greater than 300 in order to produce blends suitable for use in the process of WO 98/46409.

Claim 19 is rejected under U.S.C. (103) as being unpatentable over international application WO 98/46409 as applied above for claim 13 and further in view of international application WO 01/27169.

Reference WO 98/46409 has been discussed above.

Regarding Claim 19, WO 98/46409 does not teach that the polymer includes a polypropylene having varying tacticity within its structure.

WO 01/27169 teaches using polypropylenes with varying tacticity structures. (Page 9, Paragraph 4)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to use the polypropylenes with varying tacticity structures of WO 01/27169 during the process of WO 98/46409. The rationale to do so would have been the motivation provided by the teaching of WO 01/27169 that to do so would help improve the elasticity of the polymers. (Page 8, Paragraph 3)

Claim 21 is rejected under U.S.C. (103) as being unpatentable over International application WO 98/46409 as applied above for claim 13 and further in view of Khait (US 6, 818,173 B1).

Reference WO 98/46409 has been discussed above.

Regarding Claim 21, WO 98/46409 does not teach annealing the injection moulded article.

Khait teaches that it is well known to anneal the injection moulded articles when mixing polymers. (Column 6, Lines 10-12)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to use the annealing step of Khait during the process of WO 98/46409. The rationale to do so would have been the motivation provided by the

teaching of Khait that to do so would result in a more stable microstructure of the polymer materials. (Column 6, Lines 10-12)

Claim 22 is rejected under U.S.C. (103) as being unpatentable over International application WO 98/46409 as applied above for claim 13 and further in view of Wilson (US 6, 558, 605 B1).

Regarding Claim 22, WO 98/46409 does not teach using nanoparticles.

Wilson teaches using nanoparticles in the blend. (Column 3, Lines 40-60)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to use the nanoparticles of Wilson during the process of WO 98/46409. The rationale to do so would have been the motivation provided by the teaching of Wilson that to do so would result in increased modulus of elasticity over conventional fillers. (Column 4, Lines 50-55)

Claim 25 is rejected under U.S.C. (103) as being unpatentable over international application WO 98/46409 as applied above for Claim 13 and further in view of international application WO 01/27169.

Reference WO 98/46409 has been discussed above.

Regarding Claim 25, WO 98/46409 does not teach that the polymer includes a polypropylene having varying tacticity within its structure.

WO 01/27169 teaches using polypropylenes with varying tacticity structures. (Page 9, Paragraph 4)

It would have been obvious to a person with an ordinary skill in the art at the time the invention was made to use the polypropylenes with varying tacticity structures of

WO 01/27169 during the process of WO 98/46409. The rationale to do so would have been the motivation provided by the teaching of WO 01/27169 that to do so would help improve the elasticity of the polymers. (Page 8, Paragraph 3)

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROSHANAK ARYAN-NEJAD whose telephone number is (571)270-7665. The examiner can normally be reached on M-F, 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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/Roshanak Aryan-Nejad/  
Examiner AU 1791

/Christina Johnson/  
Supervisory Patent Examiner, Art Unit 1791